CLAIMS

1. Disposable apparatus for performing mechanical thrombectomy of dialysis grafts, comprising:

(a) an axially-elongated catheter having at least three axially elongated non-communicating passages therewithin extending substantially the axial length of said catheter;

(i) a first one of said passages as being of rounded cross-section for free axial travel therealong of a guide wire when inserted thereinto;

(b) a first balloon positioned along the exterior of said catheter proximate a first catheter end, with the interior of said first balloon being in fluid communication with a second one of said passageways, said first balloon when inflated being generally spherical and positioned about said catheter so that said catheter defines an axis of said spherical balloon shape;

(c) a second balloon positioned along the exterior of said catheter inboard of the first balloon relative to the first catheter end, with the interior of said balloon being in fluid communication with a third one of said passageways, said second balloon when inflated having an axially-elongated, generally cylindrical central portion and generally conical end portions, with said cylindrical and conical portions of said balloon being symmetrically positioned about said catheter; and

(d) said catheter including a pair of inflation ports respectively communicating with said second and third passageways proximate said second end of said catheter, adapted for connectable communication with a source of pressurized gas for selectably inflating said first and second balloons by supply of pressurized gas thereto via said second and third passageways in said catheter.

2. The apparatus of Claim 1, wherein said first balloon is latex.

3. The apparatus of Claim 1, wherein said second balloon is made of PET.

4. The apparatus of Claim 1, wherein said catheter exterior is round.

5. The apparatus of Claim 1, wherein said catheter exterior is asymmetrical.

6. The apparatus of Claim 1, further comprising radiographically detectable means on said catheter located at a predetermined position for detection by x-ray or other radiographic imaging apparatus to permit guidance of the catheter by an attending physician during the performance of a medical procedure.

7. The apparatus of Claim 6, wherein said radiographically is in band form.

8. The apparatus of Claim 7, wherein at least one of said bands is within at least one of said balloons when said balloon is inflated.

9. A method for opening dialysis grafts clogged by thrombolytic material, comprising:

(a) introducing a catheter-shielded wire into a dialysis graft;

(b) extending said wire out of said catheter within said graft;

(c) rotating said wire while moving said wire along the length of said graft to loosen thrombolytic material within said graft;

(d) withdrawing said wire into said catheter;

(e) inserting said catheter into a vein communicating with said graft sufficiently far to position an angioplasty balloon carried by said catheter within the junction of said vein and said graft;

(f) inflating said angioplasty balloon by introduction of pressurized liquid thereinto, to enlarge juncture of said vein and said graft;

(g) withdrawing said catheter and said angioplasty balloon from said juncture of said vein and said graft;

(h) inserting said catheter into an artery communicating with said graft sufficiently far to position a soft balloon carried by said catheter in said artery with junction of said artery and said graft being between said balloon and a point of entry of said catheter into said graft;

(i) inflating said soft balloon by introduction of liquid thereinto; and

(j) withdrawing said catheter from said artery-graft juncture sufficiently to pull thrombolytic material encountered by said soft balloon in the neighborhood of said artery-graft juncture into said graft.

10. A thrombectomy catheter apparatus including:

an elongated catheter having a lumen extending therethrough for passage of a thrombectomy device;

a first balloon disposed on the exterior of the catheter for expanding a stenosis at a venous junction of a dialysis graft; and

at least one other balloon disposed on the exterior of the catheter for clearing a blockage at an arterial junction of a dialysis graft.

11. A catheter including:

a first lumen extending through the catheter;

a first balloon disposed on the catheter, which is inflatable through a second lumen in the catheter; and

a second balloon disposed on the catheter, which is inflatable through a third lumen;

wherein the first and second balloons have different compliancies.

12. A catheter including:

a first lumen extending through the catheter;

a first balloon disposed on the catheter, which is inflatable through a second lumen in the catheter; and

a second balloon disposed on the catheter, which is inflatable through a third lumen;

wherein the first and second balloons have different pressure ratings.

13. A method of performing a dialysis graft thrombectomy procedure, comprising the acts of:

inserting a catheter into the graft, the catheter having at least a first balloon adapted to expand a stenosis at the venous junction of the dialysis graft and a second balloon adapted to clear a blockage at an arterial junction of the dialysis graft and a lumen through which a thrombectomy device can be inserted;

using a thrombectomy device to clear the graft of occluding material from the point of insertion of the catheter toward the venous junction and the arterial junction;

using the first balloon to expand the stenosis at the venous junction; and

using the second balloon to expand the stenosis at the arterial junction.

14. The method of Claim 13, wherein the method is performed without removing the catheter from the graft.